



DINOSAURS!

• DISCOVER THE GIANTS OF THE PREHISTORIC WORLD •

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DINOSAURS!

• DISCOVER THE GIANTS OF THE PREHISTORIC WORLD •



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IDENTIKIT



STEGOCERAS

An adult male *Stegoceras* would have
 fought fiercely with another for
 control of the herd.



Although quite small, *Stegoceras*
 was a tough creature. A two-
 legged plant-eater, *Stegoceras*
 was a member of an unusual group called
 pachycephalosaurs (pack-ee-sef-a-loh-
 saws), meaning 'thick-headed reptiles'.

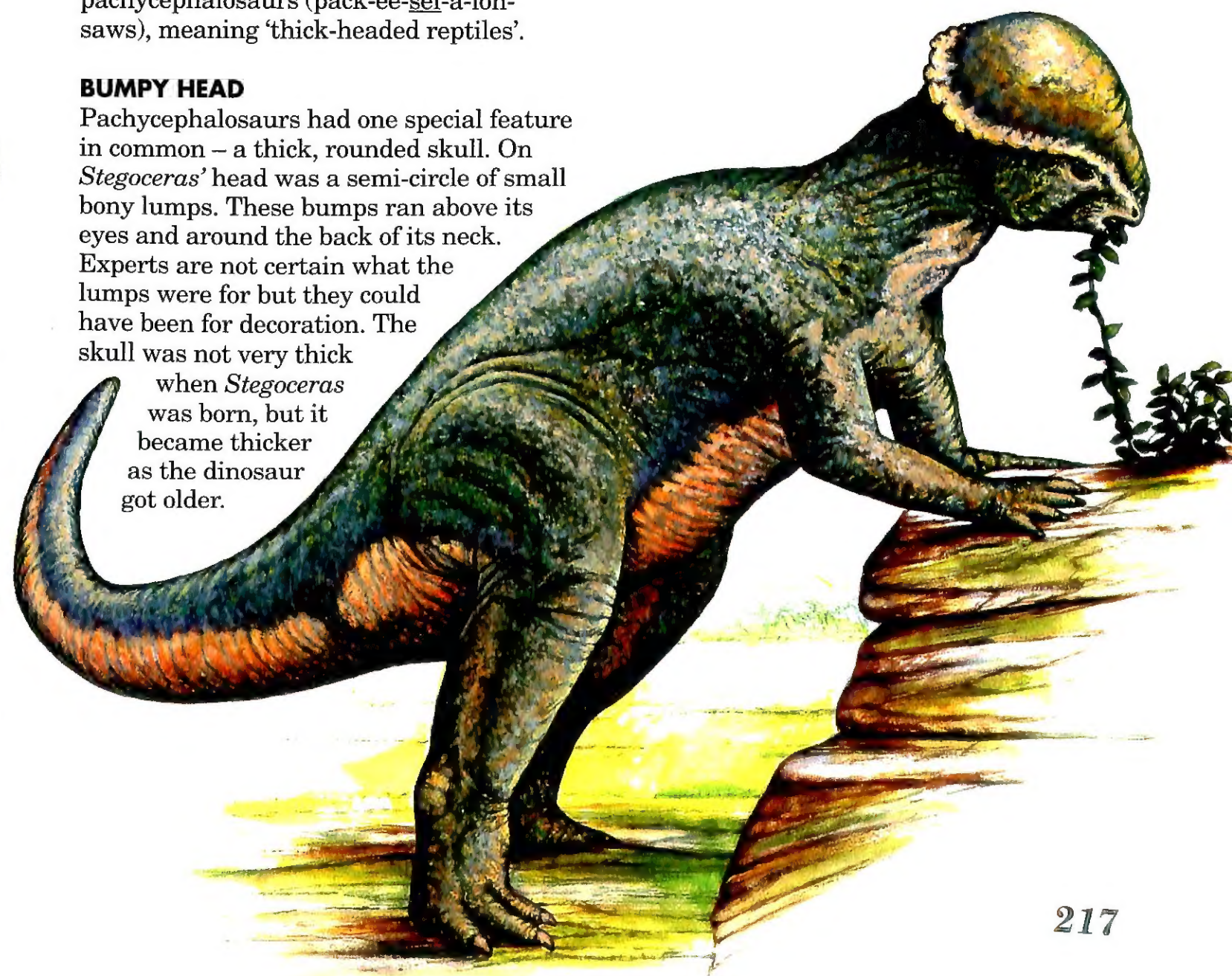
BUMPY HEAD

Pachycephalosaurs had one special feature
 in common – a thick, rounded skull. On
Stegoceras' head was a semi-circle of small
 bony lumps. These bumps ran above its
 eyes and around the back of its neck.
 Experts are not certain what the
 lumps were for but they could
 have been for decoration. The
 skull was not very thick

when *Stegoceras*
 was born, but it
 became thicker
 as the dinosaur
 got older.

HIS AND HERS

Some experts believe that they have
 discovered examples of both male and
 female *Stegoceras*. They have found that
 some skulls are thicker than others and
 believe that these thick skulls may have
 belonged to the males. A male *Stegoceras*
 could have a skull up to 6cm thick – which
 is half as thick as a brick.

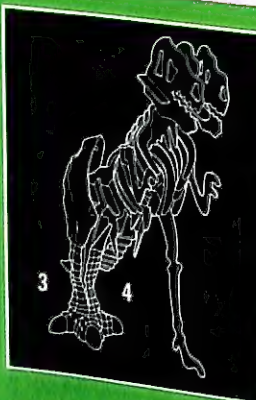


▲ Assembled
 model from Part 9

► This issue's
 model parts
 Model part 3 –
 outside right leg
 Model part 4 –
 inside right leg



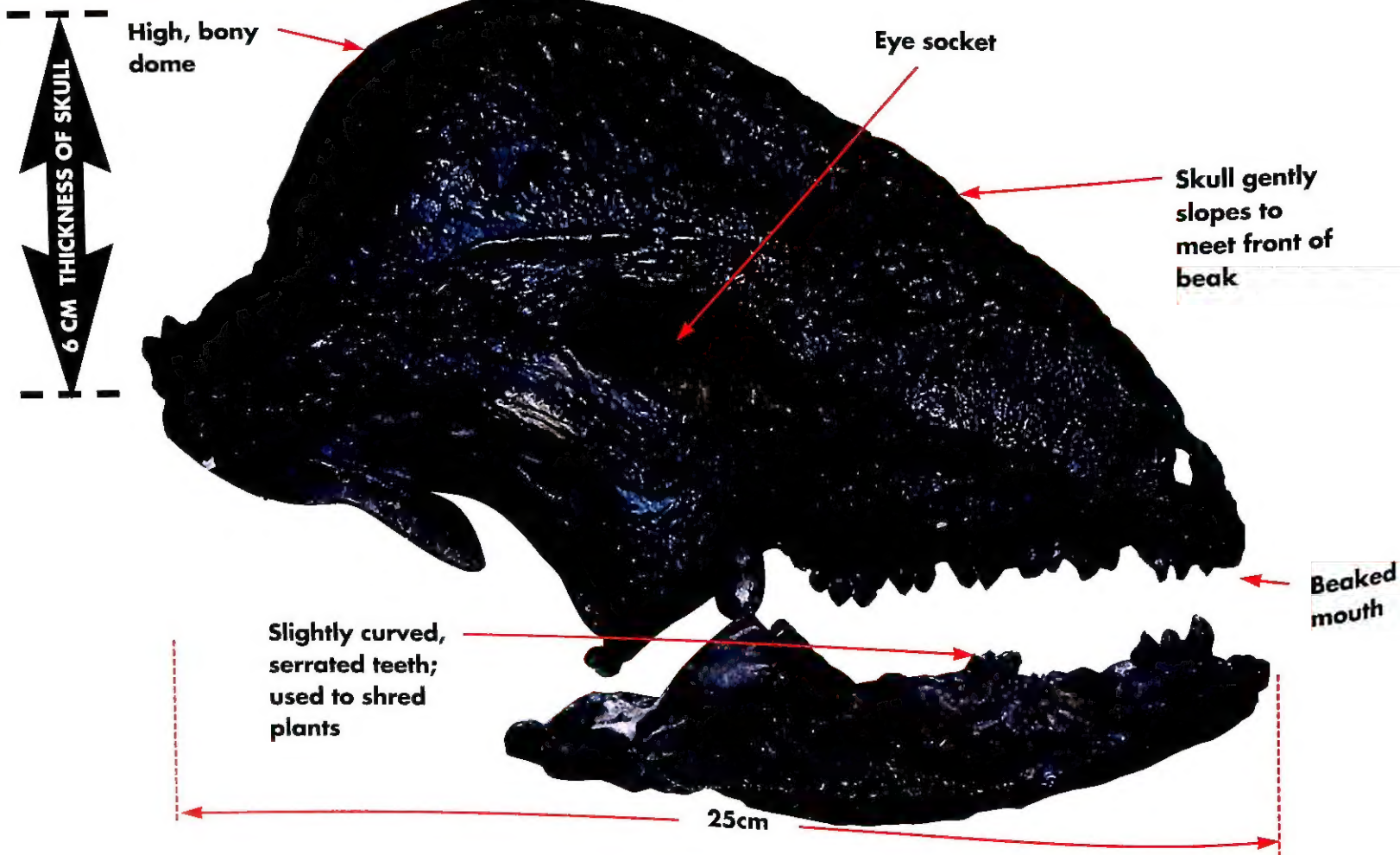
With the body leg
 pointing forward,
 hold model parts 3
 and 4 either side of
 the skeleton's right
 leg. Insert the pins
 on the outside right
 leg into the holes on
 the inside right leg.
 Push the completed
 leg down into the
 hole in the top of
 the right foot.



◀ This issue's
 assembled model

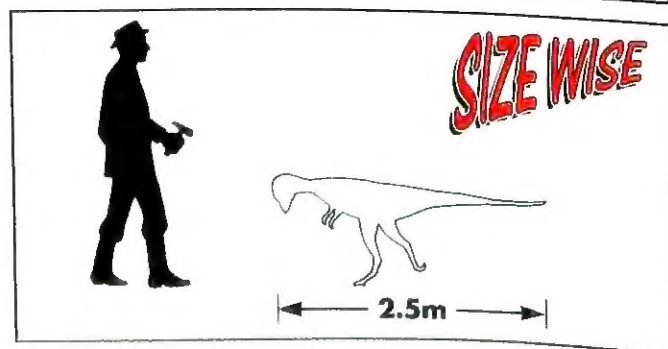


▲ Your
 completed T rex
 model



MONSTER FACTS

- **NAME:** *Stegoceras* (steg-oh-ser-as) means 'horny roof'
- **SIZE:** 2.5m long and 1.5m high
- **FOOD:** plants and ferns
- **LIVED:** 75 million years ago in the Late Cretaceous Period in North America

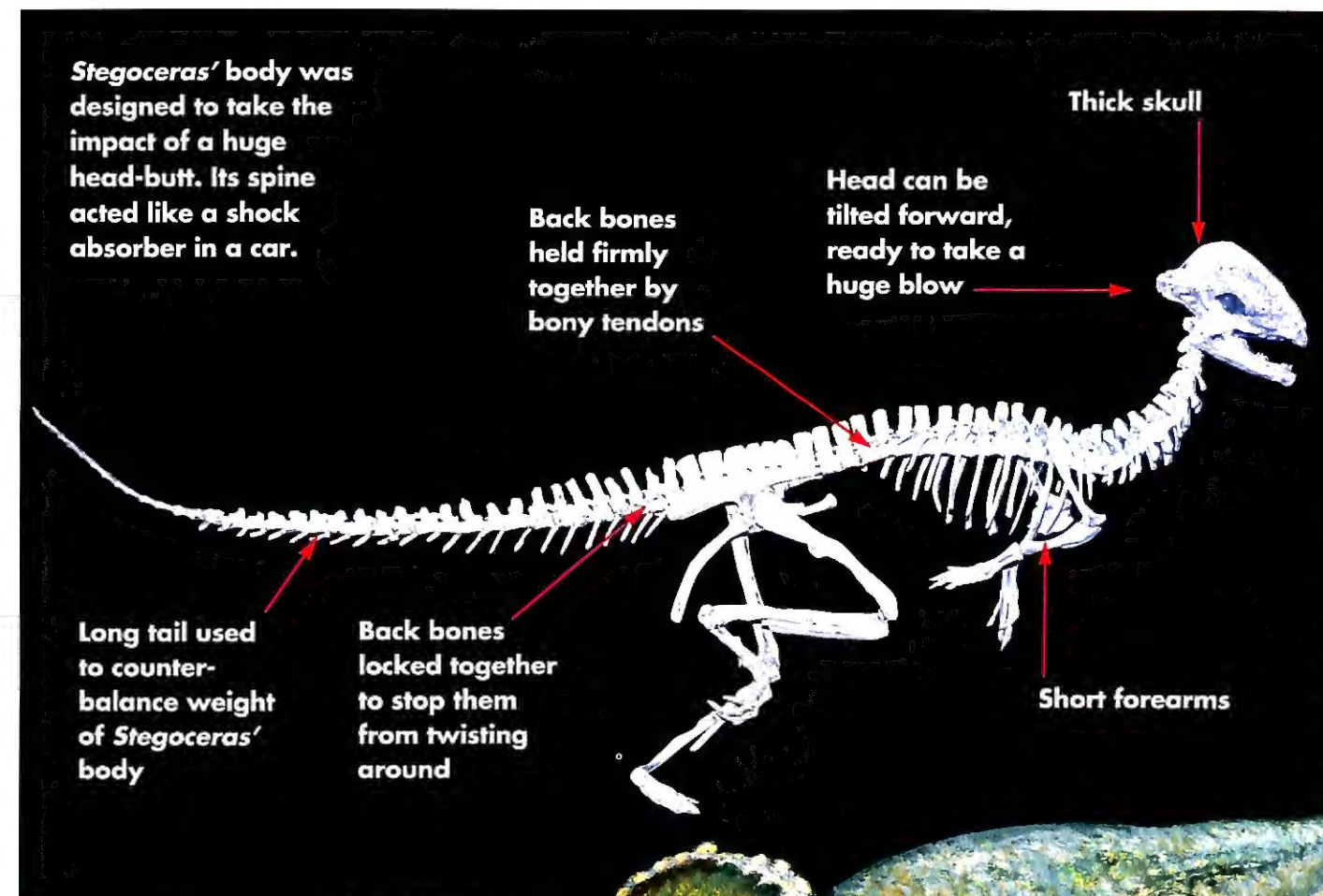


HEAD TO HEAD

Scientists believe that *Stegoceras* used its tough, heavy skull to fight against other males for control of the herd and the right to mate with the females. They think that *Stegoceras* behaved in much the same way as Bighorn rams from North America do today. The Bighorns, a kind of goat, charge at each other head-on, using their strengthened skulls as battering rams.

CRASH HELMETS

At the beginning of a fight, the two rival dinosaurs may have faced each other head-on. Then they charged at each other, colliding heads at great speed. They would not have been seriously harmed by this violent blow, as their brains, which were only the size of a chicken's egg, were protected by the extra thick skull.



BONE CRUSHER

Stegoceras may have also used its skull, which was five times thicker than a human's, as a weapon against fierce predators. A charging *Stegoceras* was probably quite a frightening sight, and a heavy blow from *Stegoceras*' skull could have broken the ribs, or even a leg, of most attackers.

LEAF SHREDDER

For most of the time, *Stegoceras* was a peaceful herbivore – it didn't spend all its time fighting! It moved through the Late Cretaceous vegetation, pulling leaves and flowers from trees and low-lying plants with its beaked mouth. Its teeth were sharp and serrated like a saw. *Stegoceras* used them to shred leaves and plants, rather like modern-day goats.



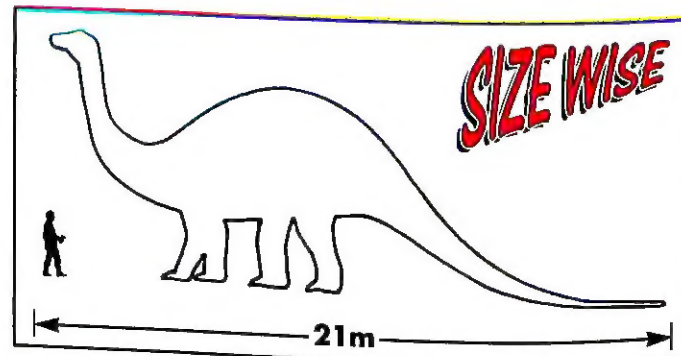
APATOSAURUS

Apatosaurus was a sturdy beast. It had a long, whiplash tail, which had about 80 bones in it.

Apatosaurus was a huge, four-legged sauropod, which was as long as a tennis court. It fed on leaves that it snipped from plants and trees with its weak, peg-like teeth. Its very long neck, which had 15 huge bones in it, was held up by strong muscles that ran along the neck bones.

LASHING OUT

Apatosaurus had an extremely long tail, almost half of which was thin and whip-like. It probably used its tail to lash out at the hungry meat-eaters that preyed on the weakest members of the herd, such as the young and the very old dinosaurs.



MONSTER FACTS

- **NAME:** Apatosaurus (a-pat-oh-saw-rus) means 'deceptive reptile'
- **SIZE:** 21m long and 8.3m high
- **FOOD:** leaves and shoots of trees and shrubs
- **LIVED:** about 150 million years ago in the Late Jurassic Period in North America

LIKE AN ELEPHANT

To support its great weight, Apatosaurus' pillar-like legs ended in broad feet, rather like those of an elephant. Its front feet had a claw on the inside toe, which it used to kick out at attackers.

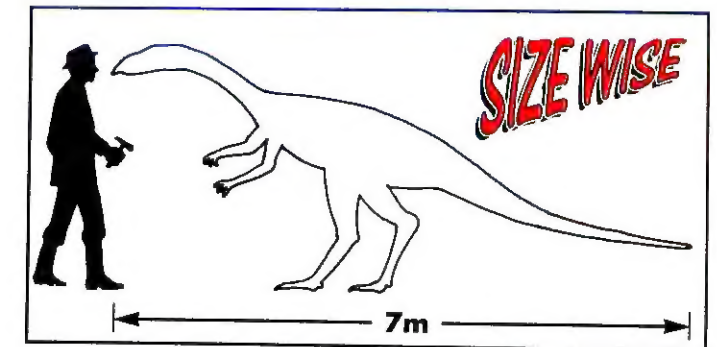
MISTAKEN IDENTITY

The first Apatosaurus was discovered in 1877. A few years later, the man who named it, O. C. Marsh, found a dinosaur, which he called *Brontosaurus*. But Marsh had made a mistake; *Brontosaurus* was, in fact, the same animal as Apatosaurus.

SEGNOSAURUS

Experts have had to piece together this dinosaur from only a few bones.

Segnosaurus was a two-legged dinosaur that was longer than a car. It had quite a small head for its size. Its arms were short with three fingers, each ending in a sharp claw.



UNUSUAL MOUTH

Experts are not sure what sort of food *Segnosaurus* ate. It had teeth at the back of its jaw to cut up food – like the two-legged meat-eaters. But at the front of its mouth was a toothless beak – like some of the plant-eaters.

MONSTER FACTS

- **NAME:** Segnosaurus (seg-no-saw-rus) means 'slow reptile'
- **SIZE:** 7m long
- **FOOD:** probably plants, but some experts have suggested meat and fish
- **LIVED:** 75 million years ago in the Late Cretaceous Period in Mongolia

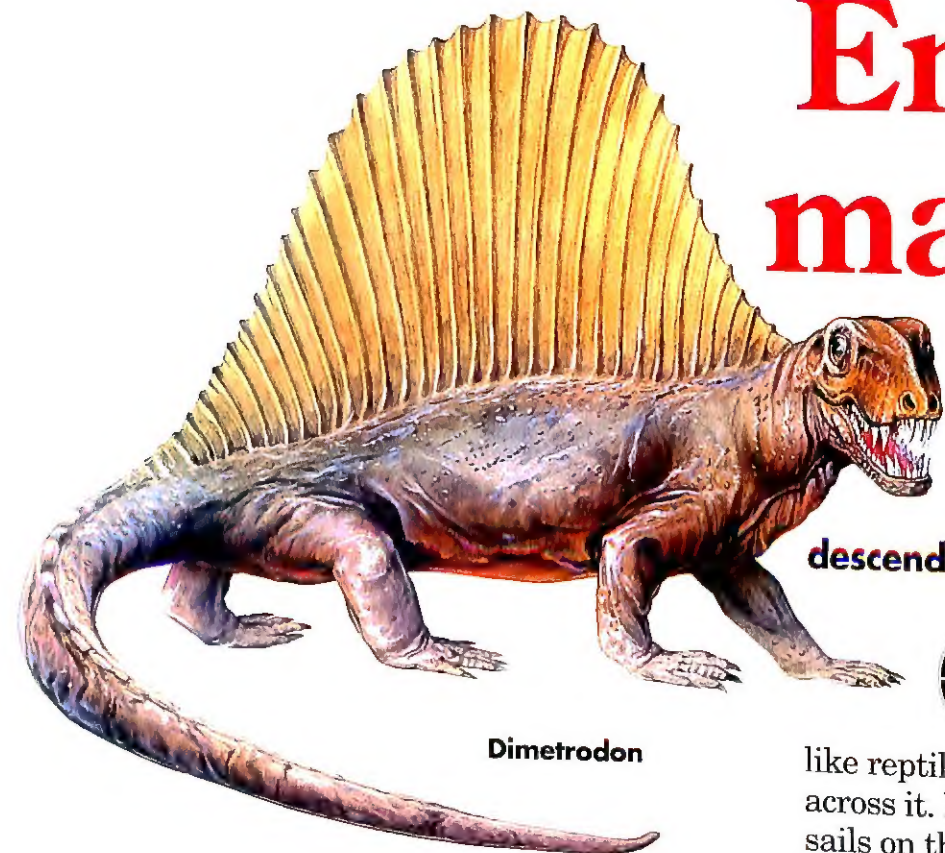
BROAD FEET

Segnosaurus also had feet quite unlike those of ordinary meat-eaters. It had sturdy legs and short, broad feet which ended in four toes. Some experts think that the feet may have been webbed.

FISH EATER

The scientist who named *Segnosaurus* in 1979 suggested that it waded, or even swam, catching fish with its claws or in its toothless beak. But scientists are still unsure; it is possible that it was a plant-eater and used its beak to nip off leaves.





Dimetrodon

Below: Two therapsids share a rock and the shade of some trees. The meat-eating *Sauroctonus* chases a lizard, while *Moschops* the plant-eater looks on.



Moschops

Sauroctonus

Enter the mammals

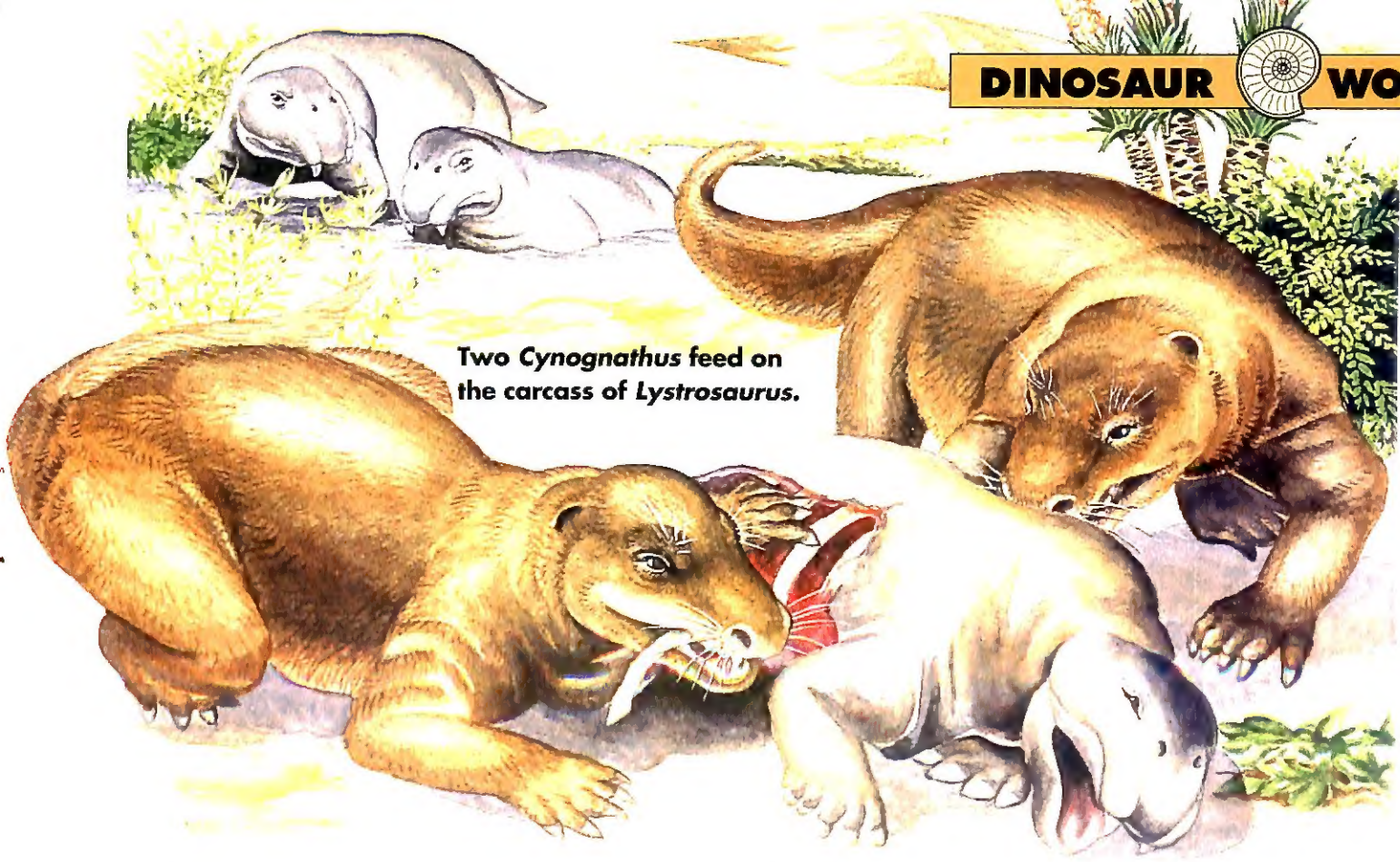
Mammals rule our world today, but throughout most of the Age of the Dinosaurs mammals were tiny creatures descended from mammal-like reptiles.



When the world was one big continent called Pangaea, early mammal-like reptiles called pelycosaurs roamed across it. Pelycosaurs had huge fan-shaped sails on their backs and so they were called 'sail reptiles'. One of the most unusual pelycosaurs was *Dimetrodon*. Fossils of its jaw suggest that *Dimetrodon* may have had a permanent grin. But this friendly looking beast preyed on harmless herbivores.

GOOD RUNNERS

Pelycosaurs were overtaken by animals called therapsids. Some therapsids, such as *Moschops*, were plant-eaters. Others, like *Sauroctonus*, were meat-eaters. They had longer legs and shorter tails than pelycosaurs, which meant that they could run faster. They looked like a cross between a lizard and a dog. *Lycaenops*, for example, had a face rather like a German shepherd dog and a stocky mammal-like body.



Two *Cynognathus* feed on the carcass of *Lystrosaurus*.

LAST, BUT FAST

The last group of mammal-like reptiles were the cynodonts, which means 'dog teeth'. They were fast-moving animals that lived about 220 million years ago. *Cynognathus* was a hairy cynodont that had strong jaws and teeth that were excellent for chewing meat.

Fierce *Lycaenops*, a therapsid, probably hunted for food in packs.



REAL MAMMALS

At the end of the Triassic, the last mammal-like reptiles vanished from the face of the Earth. The dinosaurs were well on their way to becoming the rulers of the prehistoric world. Scampering around the feet of the mighty dinosaurs, the sound of giant footsteps thundering in their ears, was a timid group of new animals that were direct descendants of cynodonts. They did not seem important, but they were because they were the true mammals from which all mammals, even humans, came.

What is? A MAMMAL-LIKE REPTILE

As their name suggests, mammal-like reptiles were somewhere in between reptiles and mammals. They were the relatives of early reptiles, but unlike reptiles, their legs were tucked underneath their bodies. Their skulls and teeth remind us of today's mammals.

Mammal family tree

The earliest real mammals were direct descendants of the mammal-like reptiles. They were like today's shrews and ate insects.



We know what early mammals were like from their fossils.

Mammals have soft skin covered in hair, they give birth to live young, feed their babies milk, produce their own body heat and have interesting teeth.

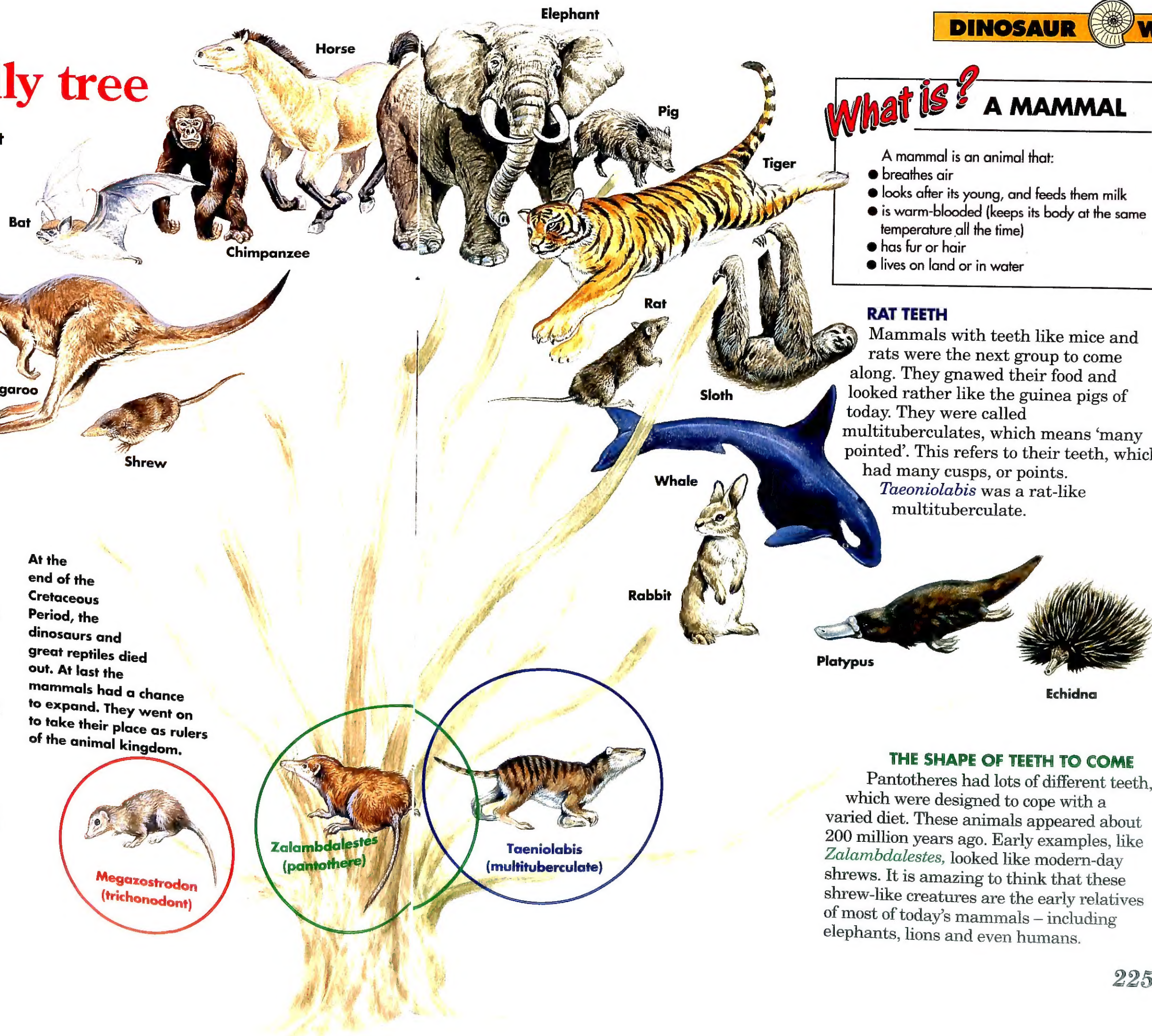
Skin and hair can tell experts a lot about an animal, but these parts do not show up in fossils, so experts concentrate on fossil teeth instead.

VALUABLE TEETH

Mammals get their energy from food. They need to eat quite a lot because mammals are usually very active creatures. Because they were more active than the prehistoric reptiles, the early mammals had different kinds of teeth to help them chew their food more thoroughly, and so get more energy from it. Scientists look carefully at teeth to tell mammal and reptile fossils apart.

THE FIRST MAMMALS

Three different groups of mammals lived during the Age of the Dinosaurs. The first group, called trichonodonts, had teeth like our back teeth. They were good for crushing insects and had three points on top of them. *Megazostrodon* was a trichonodont that lived during the Late Triassic Period.



What is? A MAMMAL

- A mammal is an animal that:
- breathes air
 - looks after its young, and feeds them milk
 - is warm-blooded (keeps its body at the same temperature all the time)
 - has fur or hair
 - lives on land or in water

RAT TEETH

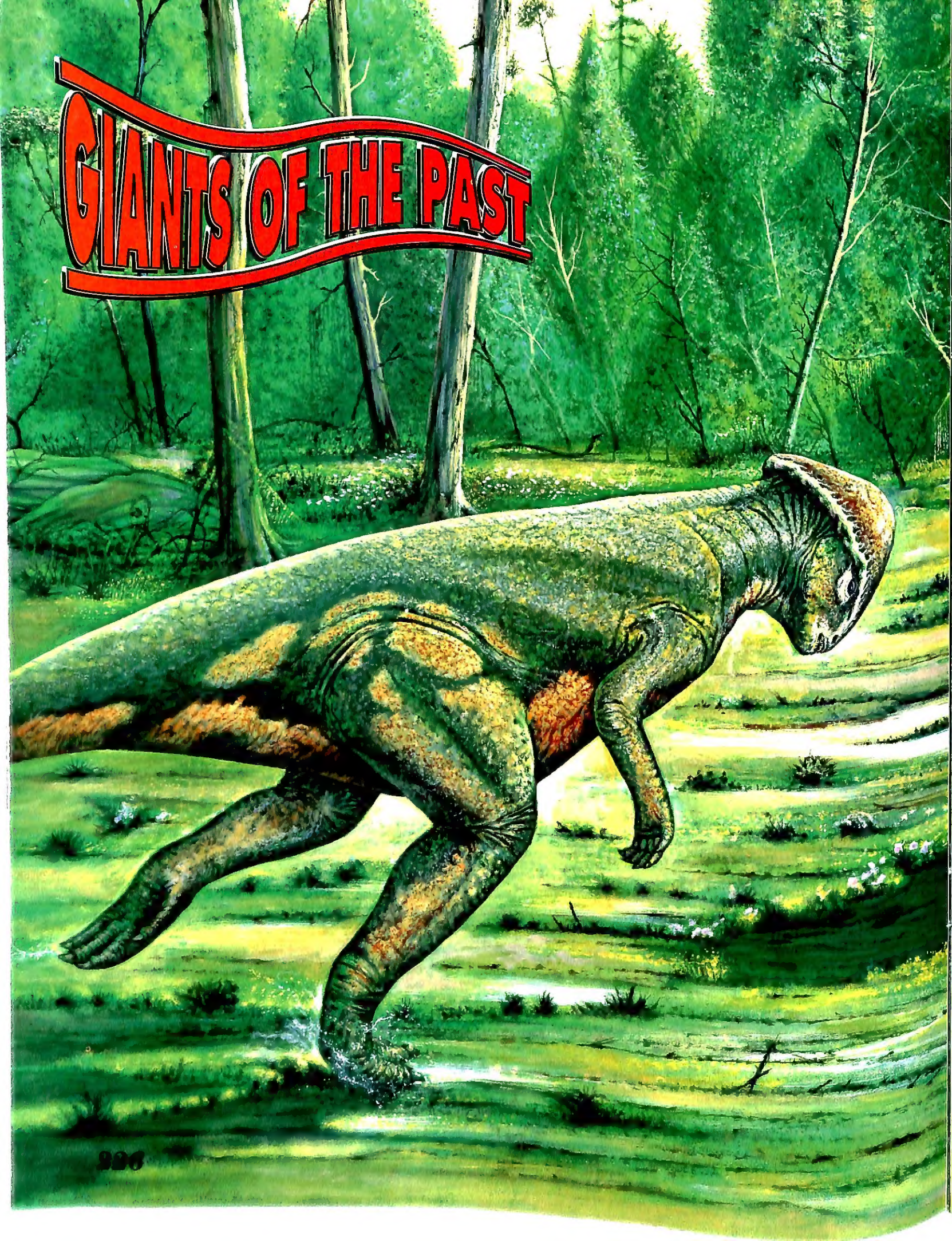
Mammals with teeth like mice and rats were the next group to come along. They gnawed their food and looked rather like the guinea pigs of today. They were called multituberculates, which means 'many pointed'. This refers to their teeth, which had many cusps, or points.

Taeniolabis was a rat-like multituberculate.

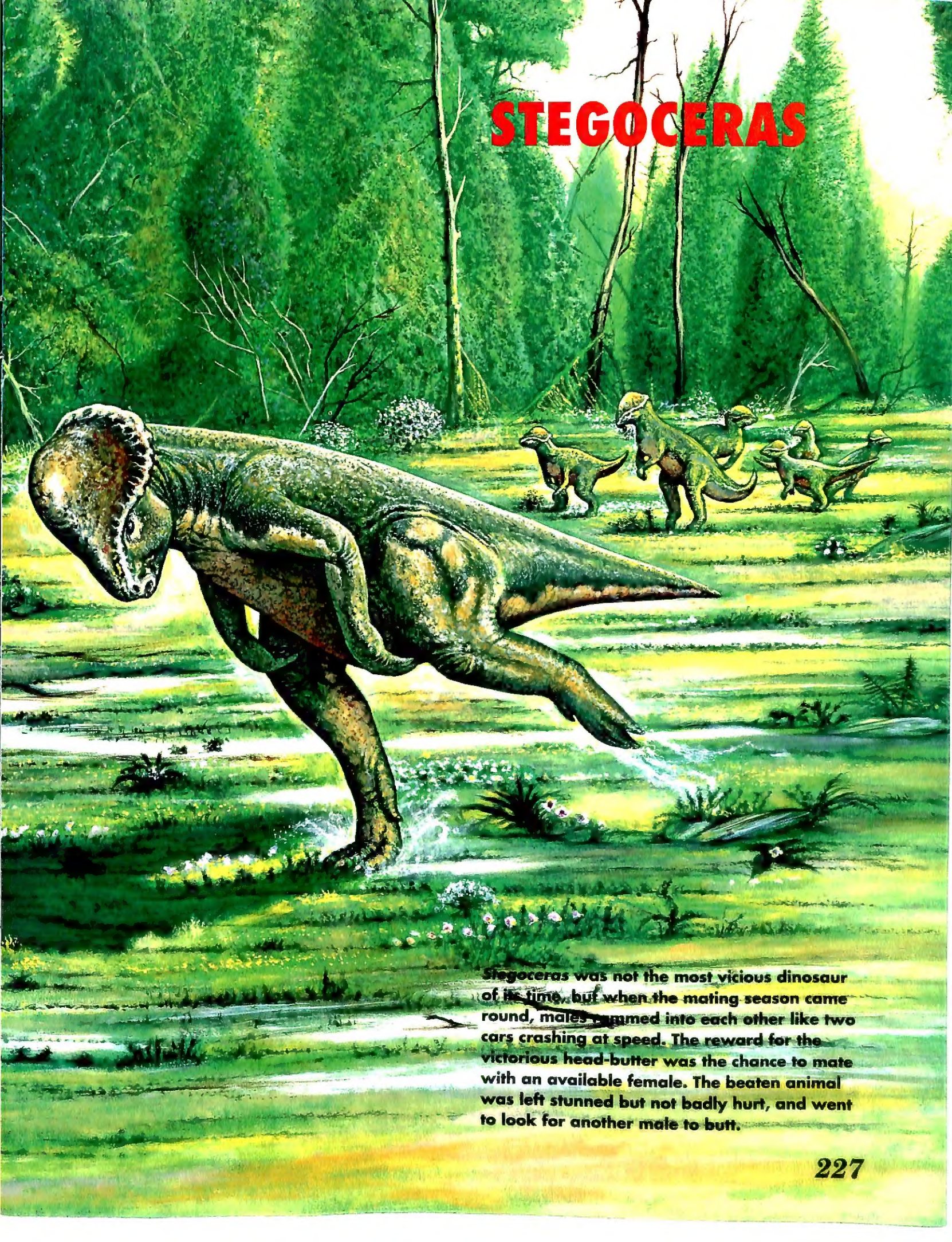
THE SHAPE OF TEETH TO COME

Pantotheres had lots of different teeth, which were designed to cope with a varied diet. These animals appeared about 200 million years ago. Early examples, like *Zalambdalestes*, looked like modern-day shrews. It is amazing to think that these shrew-like creatures are the early relatives of most of today's mammals – including elephants, lions and even humans.

GIANTS OF THE PAST



STEGOCERAS



Stegoceras was not the most vicious dinosaur of its time, but when the mating season came round, males rammed into each other like two cars crashing at speed. The reward for the victorious head-butt was the chance to mate with an available female. The beaten animal was left stunned but not badly hurt, and went to look for another male to butt.

3-D Gallery

PINACOSAURUS

19

- A club-tailed dinosaur
- Lived 80 - 75 million years ago in Mongolia and China
- Measured 5.5m long
- Ate plants

Spikes

Dinosaurs protected themselves in different ways. Some used their size, some their claws and some prickly characters used their spikes.

Many of today's animals have evolved with horns and claws, but few have spikes. Animals such as hedgehogs and porcupines rely on their spikes for defence. But only a few modern reptiles have retained their spikes. The gecko, a type of lizard, for example, raises the spikes on its back to frighten off rivals. However, the gecko's moveable, fleshy spines are nothing like the solid, vicious ones that dinosaurs wore on their bodies and heads.

SPIKED COLLAR *Styracosaurus*

Among the most impressive of dinosaurs with spikes was *Styracosaurus*. It was given its name, which means 'spiked lizard', because it had six long spikes that jutted out from its short, bony neck frill. It had many small spikes, too. The spikes protected *Styracosaurus* from predators – they made this dinosaur's neck difficult to bite. Some attackers were scared off at the sight of the spikes. Male *Styracosaurus* may have tried to attract a mate by raising their spikes in showy display.

DOUBLE SPIKES *Kentrosaurus*

Kentrosaurus had a very distinctive double row of spikes. The ones near its head were flat and broad, while the ones on its tail were narrower. Because the spikes pointed backwards, it is possible that *Kentrosaurus* charged backwards at its rivals, just as porcupines do today. In some situations, *Kentrosaurus* may not have needed to use its spikes – predators were probably put off, just by seeing them.

A BALL OF SPIKES

If it was threatened, *Kentrosaurus* may have crouched down to make it difficult for an enemy to attack its soft underbelly. Hedgehogs do the same sort of thing when they roll themselves up into a ball. Any dinosaur that tried to attack *Kentrosaurus* was in danger of becoming impaled on a spike.

PLATES AND SPIKES *Lexovisaurus*

Another well-armed dinosaur was *Lexovisaurus* that lived in England and northern France. It had rigid plates running down its back. They gave way to a row of sharp spikes when they reached the top of the tail.

A STING IN THE TAIL *Stegosaurus*

Stegosaurus, a plant-eating plated dinosaur that lived about 150 million years ago, was the largest of the plated dinosaurs. The back of this curious looking creature was lined with one or perhaps two rows of huge plates. On the end of its tail, *Stegosaurus* had four sharp spikes. These spikes were broader at the base so that once they had entered the victim's flesh, they could easily be pulled out again. *Stegosaurus* was then ready to strike again with its lethal weapon.

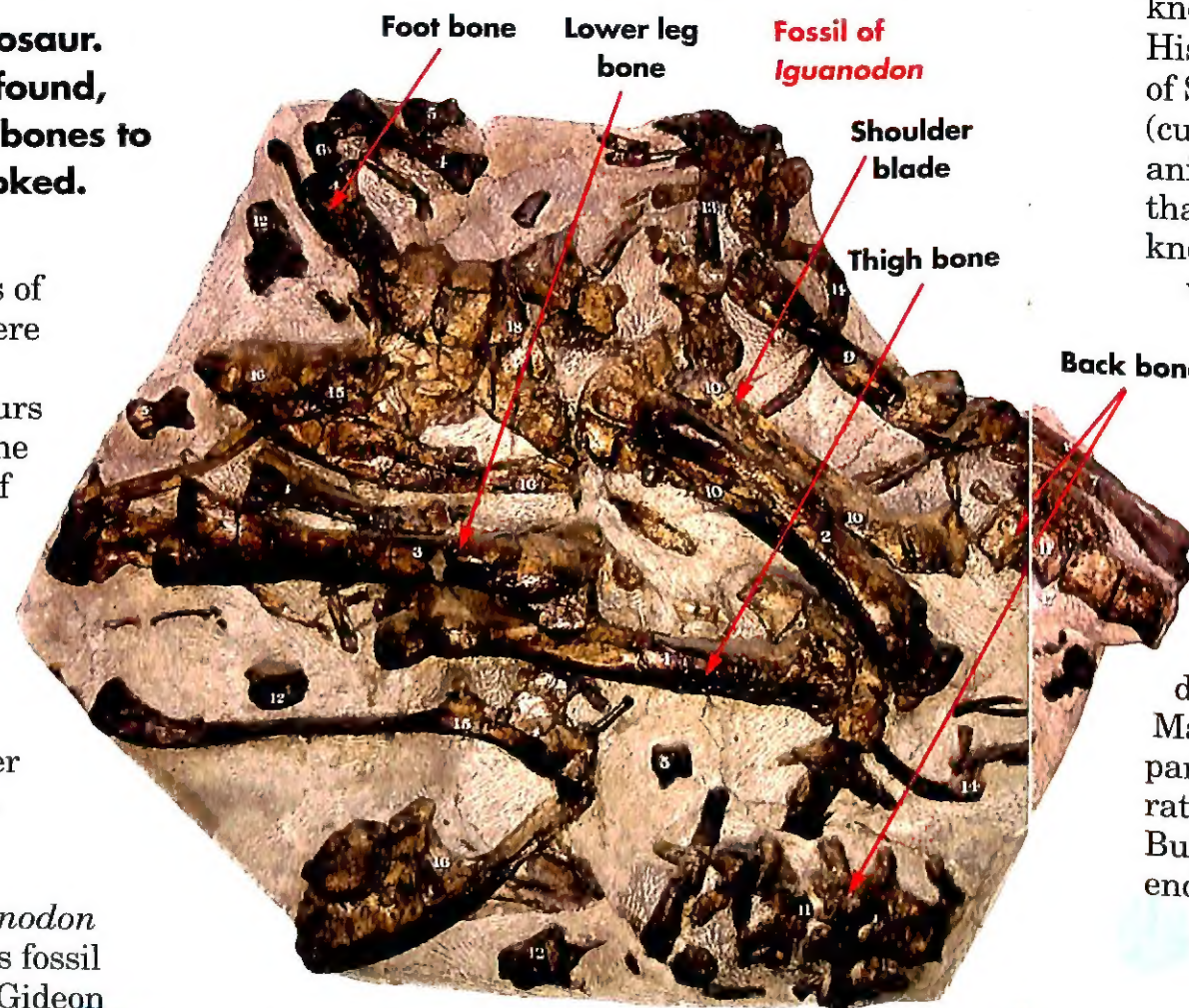
Take one dinosaur

No one has ever seen a dinosaur. When *Iguanodon* was first found, scientists had only a pile of bones to decide how it must have looked.

 The first fossils of *Iguanodon* were discovered before anyone even knew that dinosaurs had existed. The scientists of the time had to decide what kind of animal it was and what it might have looked like, but they had a difficult task. There were no books about dinosaurs, and no pictures of them. These scientists were working in the dark. No wonder their ideas seem strange to us.

LIZARD-LIKE IGUANODON

To get some idea of how *Iguanodon* looked, scientists compared its fossil remains with living animals. Gideon Mantell, the doctor who discovered *Iguanodon*, thought it must have been like the modern lizard called an iguana, but a gigantic version of it.



THE IMPOSSIBLE TASK

In 1834, Mantell was given part of an *Iguanodon*'s skeleton still in the rock. After studying the fossil (above), Mantell drew a picture of his idea of *Iguanodon*. As you can see (left), the task of creating an accurate drawing from a pile of bones was almost impossible and Mantell made many mistakes.

Gideon Mantell (left) with his drawing. He drew *Iguanodon* with a long, whippy tail and legs crouched. On its nose is the dinosaur's thumb spike, which he mistook for a horn.



ANIMALS IN THE ZOO

Richard Owen, the man who gave dinosaurs their name, knew a lot about animals. His job at the Royal College of Surgeons was to dissect (cut up) and describe animals from London Zoo that died. Owen used this knowledge to help him work out what dinosaurs looked like when they were alive.

ANIMAL MIXTURE

In 1841, Owen gave his famous lecture in which he described dinosaurs as a type of animal previously unknown. In it he described *Iguanodon* and some other dinosaurs. His ideas were different from Mantell's. Owen's *Iguanodon* had some parts taken from a crocodile, and some rather like an elephant or a hippopotamus. But the thumb spike was still firmly on the end of its nose.



One of the Crystal Palace *Iguanodon* peers through the undergrowth in the park. You can still see the thumb spike, which both Mantell and Owen mistook for a horn, on the end of its nose.

CRYSTAL PALACE

Owen eventually got a chance to see his ideas made into life-size models. In 1854,

the sculptor Benjamin Waterhouse Hawkins began to create dinosaur models for Crystal Palace Park in south London and Owen directed the work. They can still be seen today, but *Iguanodon* looks more like a scaly rhinoceros than a dinosaur.



Benjamin Waterhouse Hawkins' first model of *Iguanodon* (left), made in 1854. Richard Owen (below) told Hawkins what the animal should look like and the sculptor made the life-size models.



DOWN THE MINE

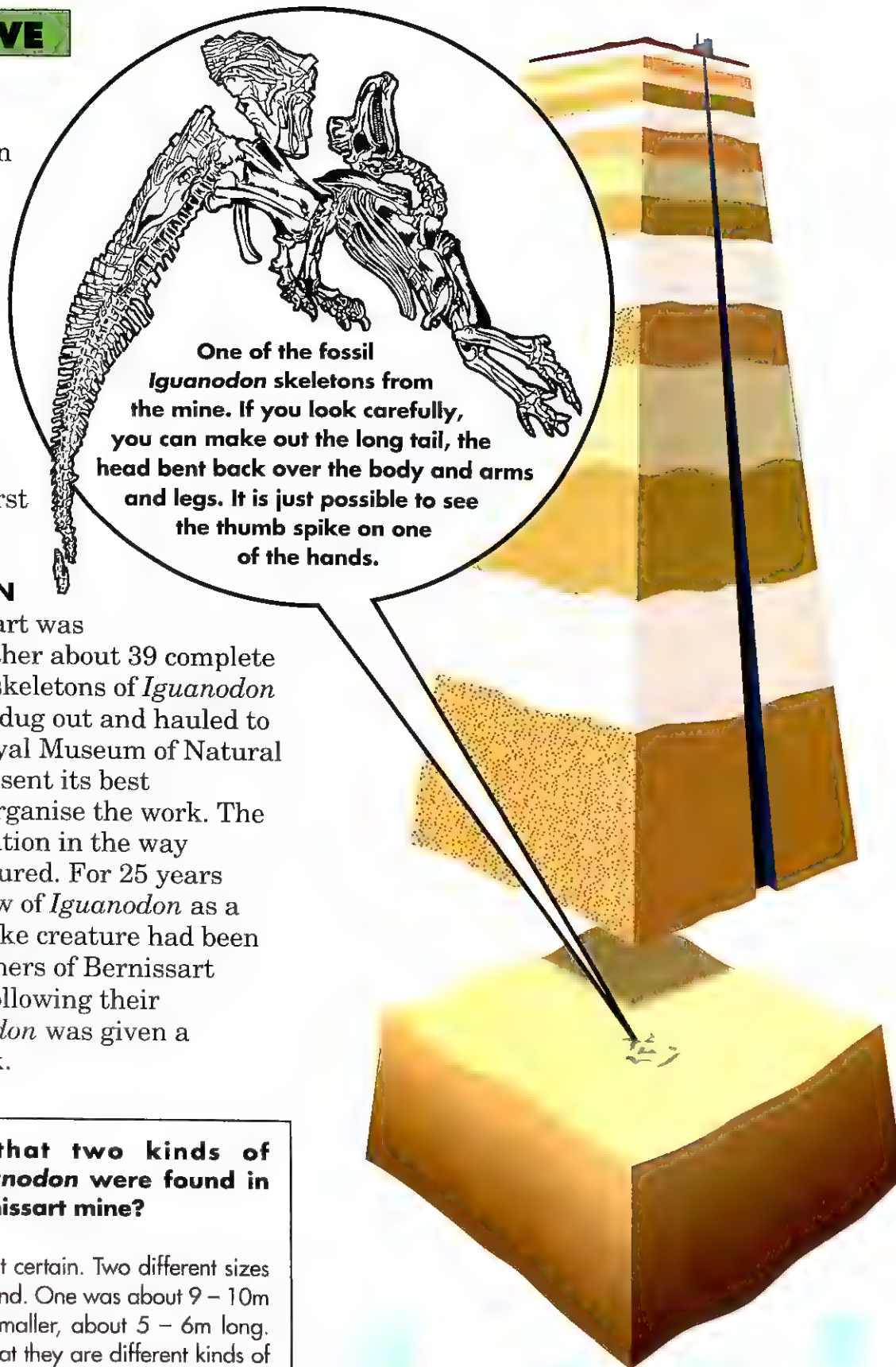
Deep underground in a coal mine in Belgium, in 1878, a group of miners were digging. But coal was not the treasure they found. They dug out something far more exciting: a fossil of *Iguanodon*. In fact, it was the first of many skeletons.

FOSSIL REVOLUTION

The find at Bernissart was remarkable. Altogether about 39 complete or nearly complete skeletons of *Iguanodon* were painstakingly dug out and hauled to the surface. The Royal Museum of Natural History in Brussels sent its best palaeontologist to organise the work. The find caused a revolution in the way *Iguanodon* was pictured. For 25 years Richard Owen's view of *Iguanodon* as a stocky, rhinoceros-like creature had been popular, but the miners of Bernissart changed all that. Following their discoveries, *Iguanodon* was given a completely new look.

Is it true that two kinds of *Iguanodon* were found in the Bernissart mine?

Scientists are not certain. Two different sizes of *Iguanodon* were found. One was about 9 – 10m long. The other was smaller, about 5 – 6m long. Some scientists think that they are different kinds of *Iguanodon*. Others think that the fossils are the same kind of *Iguanodon*, but the larger dinosaurs were male and the smaller ones were female. Scientists are still debating the problem.



One of the fossil *Iguanodon* skeletons from the mine. If you look carefully, you can make out the long tail, the head bent back over the body and arms and legs. It is just possible to see the thumb spike on one of the hands.

Many *Iguanodon* fossils were discovered down the coal mine at Bernissart, Belgium, in April 1878. They were in a deep pit of clay that ran through the coal seams 322m down. The dinosaurs had not all died at the same time.

DANGEROUS WORK

It took three years to dig all the skeletons out of the ground. The team had to work in extremely difficult conditions – it was cramped, dark and dangerous work. When all the remains were safely back in Brussels, the mammoth task of preserving and mounting the fossils began.

SOLVING THE PUZZLES

Never had so many skeletons of one kind of dinosaur been found together. It gave the museum in Brussels a unique chance study and reconstruct *Iguanodon*.

Louis Dollo was the palaeontologist in charge. As he studied the fossils, Dollo was able to clear up many of the mysteries about *Iguanodon*, including where the 'nose horn' really belonged.



Strung from the ceiling of a Brussels chapel is the first *Iguanodon* reconstruction, in about 1882. The team that reassembled the fossil stands by.

NEW-LOOK IGUANODON

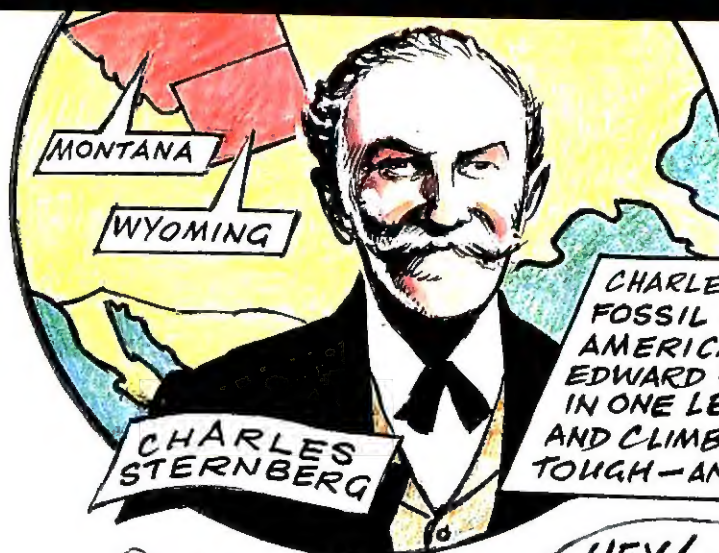
The work was slow and painstaking. It took place in an ancient chapel that was used as the museum's laboratory.

Eventually, the new-look *Iguanodon* emerged. It was totally different from all the former ideas. It did not look like a lizard or a rhinoceros. Dollo's dinosaur was a huge, upright animal that walked on two legs. And its 'nose horn' turned out to be a large thumb spike.

A model based on the Bernissart skeletons looks like a real animal. But studies of the dinosaur continue and ideas of how it looked are still changing.

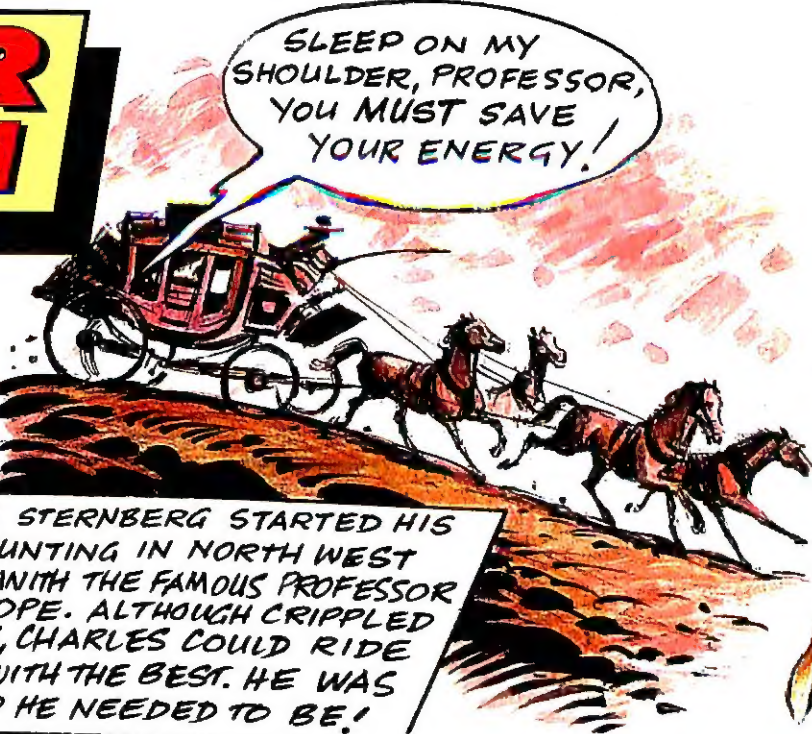


DINOSAUR IN THE FLESH

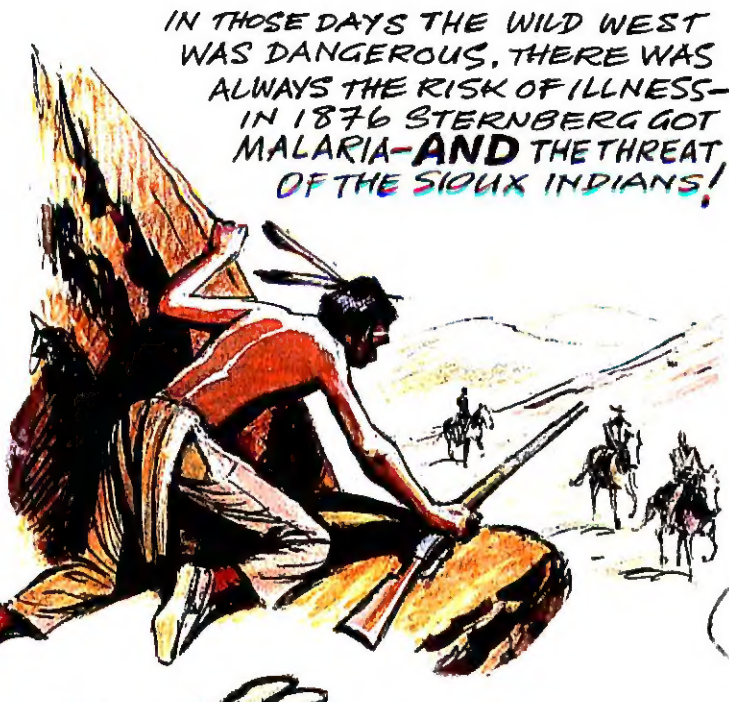


CHARLES STERNBERG

CHARLES STERNBERG STARTED HIS FOSSIL HUNTING IN NORTH WEST AMERICA WITH THE FAMOUS PROFESSOR EDWARD COPE. ALTHOUGH CRIPPLED IN ONE LEG, CHARLES COULD RIDE AND CLIMB WITH THE BEST. HE WAS TOUGH—AND HE NEEDED TO BE!



SLEEP ON MY SHOULDER, PROFESSOR, YOU MUST SAVE YOUR ENERGY!

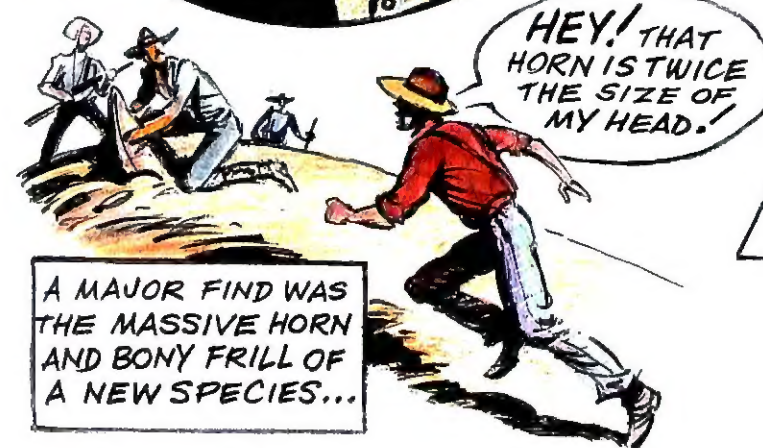


IN THOSE DAYS THE WILD WEST WAS DANGEROUS, THERE WAS ALWAYS THE RISK OF ILLNESS—IN 1876 STERNBERG GOT MALARIA—AND THE THREAT OF THE SIOUX INDIANS!



THEY WERE ARMED, BUT STERNBERG NEVER USED HIS GUN—HE WAS HUNTING FOSSILS—NOT INDIANS!

TAKE IT EASY YOU GUYS! THAT'S A PRECIOUS SPECIMEN!



HEY! THAT HORN IS TWICE THE SIZE OF MY HEAD!

A MAJOR FIND WAS THE MASSIVE HORN AND BONY FRILL OF A NEW SPECIES...

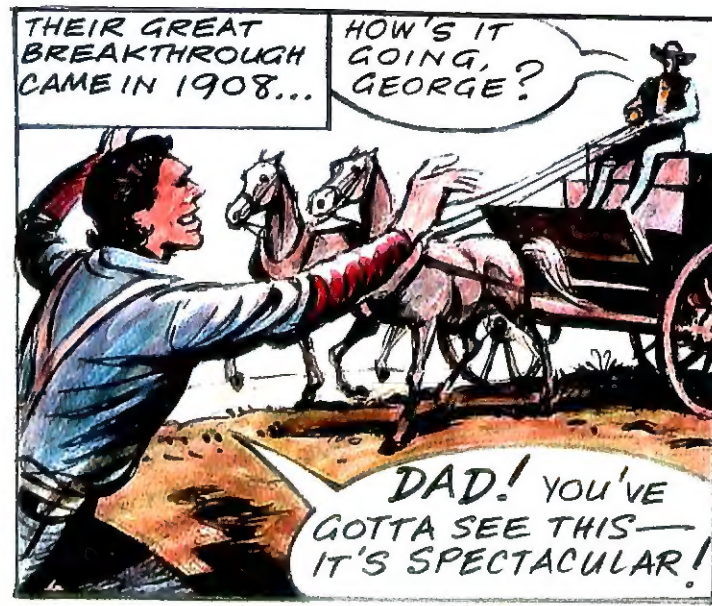
IT WAS THE FIRST HORNED DINOSAUR TO BE DISCOVERED. THEY NAMED IT **MONOCLONIUS** IT WAS THREE TIMES AS LONG AS A MAN



COPE DIED IN 1897, BUT CHARLES AND HIS THREE SONS—LEVI, GEORGE AND CHARLES—CARRIED ON COPE'S DEDICATED WORK



COME ON BOYS—KEEP UP!



THEIR GREAT BREAKTHROUGH CAME IN 1908...

HOW'S IT GOING, GEORGE?

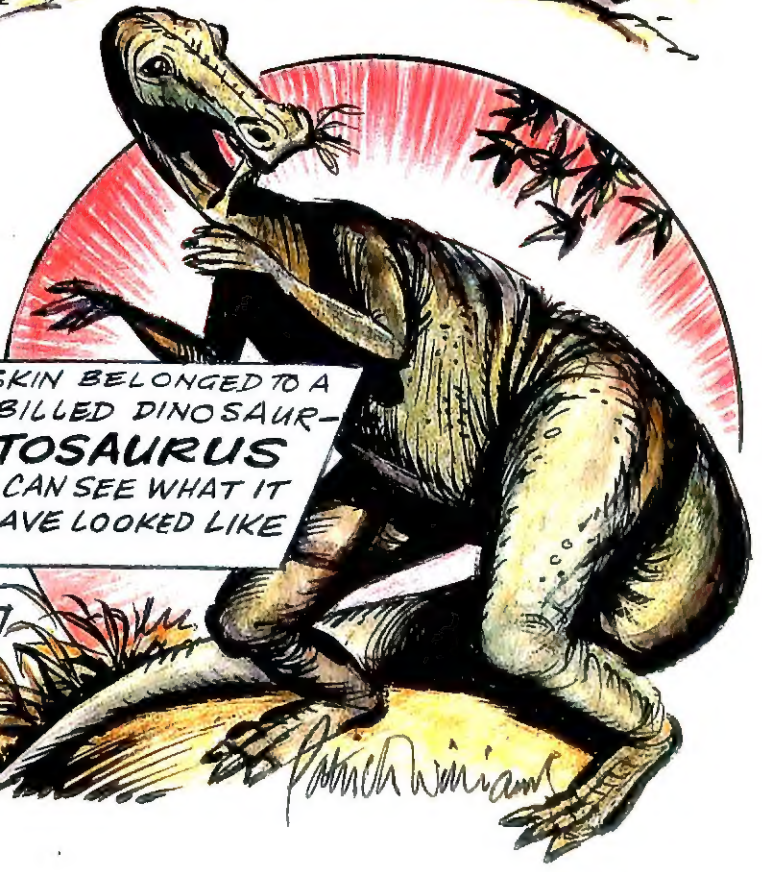
DAD! YOU'VE GOTTA SEE THIS—IT'S SPECTACULAR!



WONDERFUL! THIS IS THE MOST IMPORTANT FOSSIL I HAVE EVER SEEN!



WHAT GEORGE HAD FOUND WAS THE FIRST EVER FOSSIL IMPRESSION OF **DINOSAUR SKIN**—UNTIL THEN EXPERTS COULD ONLY GUESS AT WHAT COVERED THE DINOSAUR BONES



THE SKIN BELONGED TO A DUCKBILLED DINOSAUR—**ANATOSAURUS** NOW WE CAN SEE WHAT IT MIGHT HAVE LOOKED LIKE

Patricia Williams

Improve and test your knowledge with... **Fact File**

Follow the footprints to complete the quiz and get to the bottom of the question!

- 1** What did *Stegoceras* eat?
- a) plants
 - b) meat
 - c) fish

The Age of Fishes
The first backbone animals evolved 150 million years before the dinosaurs arrived – they were the fishes.

- 8** How big was *Compsognathus*?
- a) pigeon-sized
 - b) chicken-sized
 - c) ostrich-sized

- 9** Where did *Chungkingosaurus* live?
- a) Chicago
 - b) Christmas Island
 - c) China

- 10** What does *Styracosaurus* mean?
- a) pointed crest
 - b) horrible face
 - c) spiked lizard

- 2** When was *Segnosaurus* named?
- a) 1975
 - b) 1977
 - c) 1979

Earth mover
The men who uncovered the first fossils of a dinosaur from New Mexico calculated that it must have weighed as much as five large elephants. No wonder they called it *Seismosaurus*: the name means 'earth-shaker'!

- 7** How many dinosaurs were found in Bernissart?
- a) 39
 - b) 4
 - c) 14

A nightmarish occupation
Edward Drinker Cope, the famous fossil hunter, was well known for his short temper. One reason for this was that he found it hard to sleep at night because he had horrible nightmares about dinosaurs.

Solid flies
Millions of years ago, all over the world, flies became trapped in the sticky resin of trees as they crawled along branches. As more resin oozed around the flies and hardened into amber, the dead flies became perfectly preserved in the transparent, orange-coloured coffins that can still be found today.

- 3** How long was *Apatosaurus*?
- a) as long as a tennis court
 - b) as long as a cricket pitch
 - c) as long as a car

- 4** What did *Dimetrodon* have on its back?
- a) a plate
 - b) a frill
 - c) a sail

- 5** What do mammals have that reptiles do not?
- a) teeth
 - b) hair
 - c) tails

Straight from the Ark
When some dinosaur footprints were found in Connecticut in the USA in the early nineteenth century, people who lived nearby believed they had been made by a large bird from Noah's Ark.



Back from the dead
No wonder experts were open-mouthed with surprise when they identified the odd-looking fish caught off the coast of Africa in 1928. It was a coelacanth. Everyone believed that the coelacanths had become extinct 70 million years ago.

Deadly curves
Many dinosaur fossils have been found with neck and tail curving round towards each other. Some experts used to think that this position was the result of the dinosaurs having eaten something poisonous which killed them. They now know that muscles shorten after death and pull the neck and the tail towards the body.

CHUNGKINGOSAURUS

170 MYA

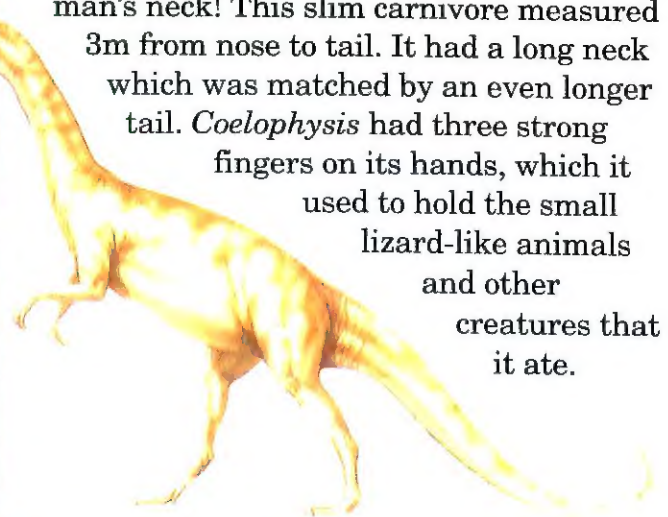
Chungkingosaurus (chung-king-oh-saw-rus) browsed around China during the Jurassic Period. This four-legged dinosaur was about 4m long and had little defence against meat-eating monsters apart from two rows of large, thick, plate-like spines that ran all the way down its back.



COELOPHYSIS

218 MYA

When *Coelophysis* (seel-oh-fy-sis) stood on its hind legs, it would have been just the right height to nip a mouthful of flesh from a man's neck! This slim carnivore measured 3m from nose to tail. It had a long neck which was matched by an even longer tail. *Coelophysis* had three strong fingers on its hands, which it used to hold the small lizard-like animals and other creatures that it ate.



COLORADISAURUS

200 MYA

Coloradisaurus (col-oh-rad-i-saw-rus) does not take its name from Colorado in the USA, but from the Los Colorados rocks in Argentina, South America, where its fossilized bones were found. It lived during the Triassic Period and was about the same size as *Chungkingosaurus*, but it had a shorter snout. Its small, blunt teeth were ideal for grinding down the plants and shoots it fed on.

COMPSOGNATHUS

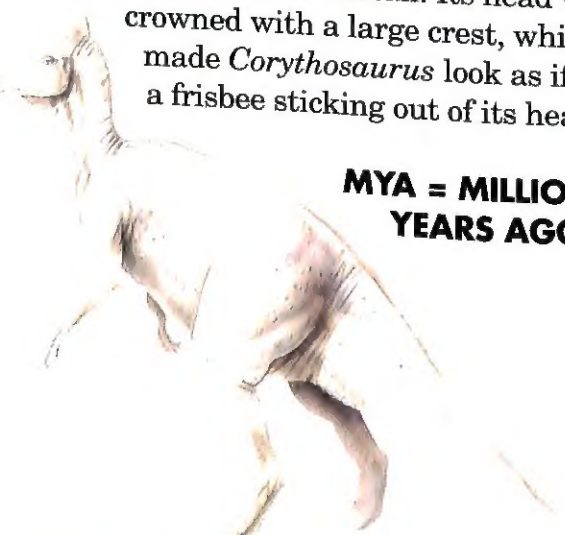
142 MYA

Compsognathus (comp-sog-nay-thus) was about the same size as a big chicken. It chased lizards and other little reptiles of the Jurassic Period for food. This little dinosaur's tail was as long as the rest of its body. Herds of *Compsognathus* scampered around on their hind legs, but could run like the wind whenever danger loomed.

CORYTHOSAURUS

75 MYA

Corythosaurus (co-rith-oh-saw-rus) was one of the duckbilled hadrosaurs that lived in North America. It was a big, heavy beast, 10m long and just under 7m tall. Its head was crowned with a large crest, which made *Corythosaurus* look as if it had a frisbee sticking out of its head.

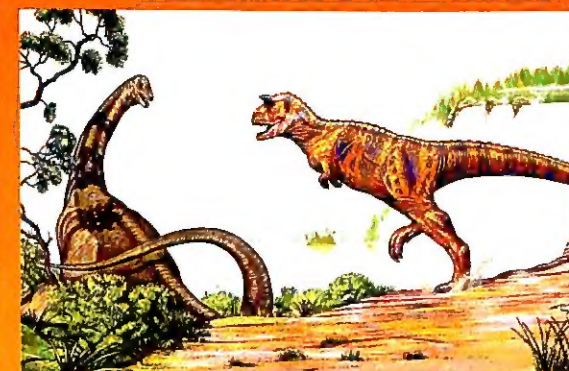


MYA = MILLION
YEARS AGO

COMING IN PART 11 OF

DINOSAURS!

Deinonychus went for its prey with claws as long and sharp as a sword. IDENTIKIT looks at this hunter AND two of its reptilian relatives, *Massospondylus* and *Lambeosaurus*.



PLUS

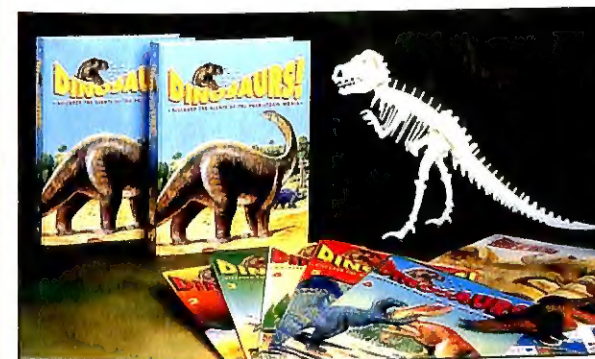
More parts for your life-like T rex body.

AND The terrifying creatures that lived in the seas when dinosaurs were masters of the land swim into DINOSAUR WORLD.



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Dr. David Norman of Cambridge
University answers your
dinosaur questions

ASK THE EXPERT

Why have so many dinosaur fossils been found in Alberta in Canada?

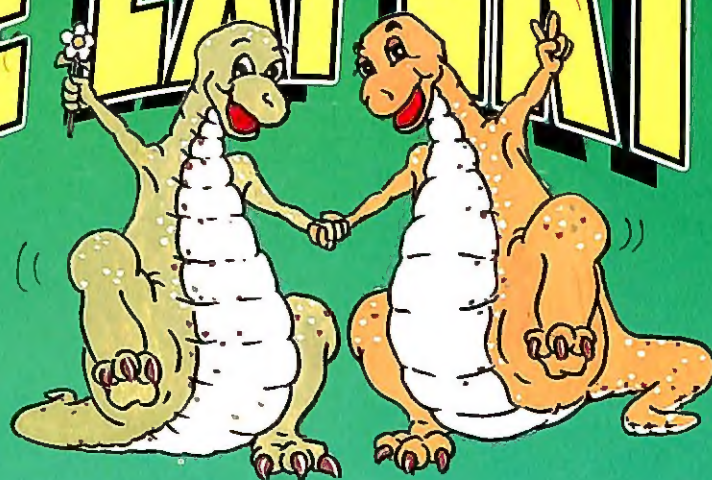
Hundreds of millions of years ago, the part of the world now called the Alberta Badlands

was like a busy crossroads for dinosaurs. This area of Canada lay on the route the dinosaurs took as they moved north towards what is now the Arctic, or south to cross the land that once joined Asia to America. Fossils of hundreds of dinosaurs have been dug up in Alberta's National

Dinosaur Park. In one huge dinosaur grave, the bones of more than 50 dinosaurs have been found.

Did dinosaurs sleep?

Yes! All animals, including humans, need to rest and sleep. Today's reptiles, in particular, spend a great deal of their time dozing. There is no reason to believe that dinosaurs behaved any differently.



Were all dinosaurs ferocious?

No, many dinosaurs, such as *Diplodocus*, were gentle plant-eaters that spent most of their time munching plants. They depended on their huge size to put off attackers. Some of the smaller meat-eaters like *Compsognathus* killed small reptiles and tiny mammals, but they were not in the same league as the real killers of the prehistoric world – the carnosaurs, such as *Tyrannosaurus rex*.

Did dinosaurs pair for life?

Experts don't think dinosaurs mated for life. There are few animals that stay with the same mate for most of their adult lives. Although some dinosaurs nested in groups and may have cared for their young, it is unlikely in the world in which they lived that a male and a female dinosaur would stay together for long after they had mated.

